APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
CHANG, RICHARD

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/886,518	SOMASHEKHAR, HOSAGRAHAR
	Examiner	Art Unit	
	Richard Chang	2616	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 February 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>2-6,13-19,23,24 and 26-33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>2-6 and 32-33</u> is/are allowed.

6)☒ Claim(s) <u>13-19,22-24 and 26-31</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>18 January 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments and amendments, filed on 09/06/2005, with respect to claims 2-6,13-19,23-24 and 26-33 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the destination corresponding to each of the (data) cells is identified, and the cells are forwarded to corresponding buffers, wherein each buffer ontains only (data) cells which are to be forwarded to the same destination.. .Each buffer is read during a corresponding time slot, and all of the data read out of the buffer is forwarded to the corresponding destination and ...either data contained in these buffers is read out of each buffer sequentially . . . each buffer has a corresponding, dedicated time slot in each subframe during which data will be read out of the buffer, in applicant's remarks, page 14, 1st paragraph and page16, last paragraph) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)..

Claims 1, 7-12, 20-21 and 25 had been canceled..

Claims 32-33 are newly added.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 13-19,22-24 and 26-31 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US patent 6,347,234 ("Schwartz et al.") in view of US patent No.

6,781,984 ("Adam et al.").

Regarding claims 13-14, 16 and 19, Schwartz et al. teach a systems and

methods for switching packets of digital data in a switching node used in a digital data

network (a system for transporting data from a plurality ingress to a plurality of egress

line) (See Fig. 2, Col. 5, lines 5-8) comprising of

an inter-port packet switch (22, data switching matrix), in the form of a crosspoint

switch, having a plurality of input ports coupled to of input port modules (20(n)) and a

plurality of output coupled to of output port modules (21(n)) wherein for each of the

ingress ports, the data switching matrix is configured to transport data from each the

ingress port to one of the plurality of egress ports (See Fig. 2, Col. 5, lines 48-50),

a number of input port modules (20(1) through 20(N), a plurality of ingress edge

units), each of which is coupled to one of the plurality of ingress ports of the an inter-

port packet switch (22, data switching matrix), wherein each of the plurality of ingress

edge units is configured to receive a data from a corresponding input ports (25(n)(1)

through 25(n)(M), one or more of a plurality of ingress lines) (See Fig. 2, Col. 5, lines

12-17),

a number of output port modules (21(1) through 21(N), a plurality of egress edge

units), each of which is coupled to one of the plurality of egress ports of the an inter-port

packet switch (22, data switching matrix), wherein each of the plurality of egress edge

units is configured to transmit data received from the data switching matrix to a plurality

of output (egress) ports (26(n)(1) through 26(n)(M), one or more of a plurality of egress

lines) (See Fig. 2, Col. 5, lines 24-29),

wherein, for each packet received, the input port module (20(n), each of the

plurality of ingress edge units) is configured to identifies from the destination address

contained in the each received packet's header,

wherein the packet (portions of the data) corresponding to each of the output port

module (21(n), egress edge units) is stored in a corresponding buffer and wherein data

in each buffer is transmitted to the corresponding egress edge unit (21(n)) via the inter-

port packet switch (22, data switching matrix) corresponding to real time meta-data

packet control signals (in a predetermined time slots) (See Fig. 2, Col. 5, lines 21-31),

wherein there is a plurality of buffers of the packets received from the network

interface (30) in the packet memory (31) for all input (ingress) ports 25(n) in the input

port module 20(n), and the control circuit (33) may also receives packet transfer

requests directly via a packet segment generator (34) to controls retrieval and transfer

of packets from the packet memory (31) to the inter-port packet switch (22) for transfer

to the output port modules 21(n) (independent of the predetermined time slot) (See Fig.

2, Col. 10, lines 30-35),

wherein the communication links 13(p) may utilize any convenient information

transmission medium including optical fiber links for carrying optical signals (See Fig. 1,

Col. 5, lines 18-21),

wherein the input port module 20(n) has a plurality of input (ingress) ports

(25(n)(1) through 25(n)(M)) which are connected to respective one of the

communication links 13(p) for receiving packets (component with line function) (See Fig.

2, Col. 5, lines 15-20), and

wherein function modules to transfer the packet to the switching fabric

(component with service function) (See Fig. 2, Col. 5, lines 32-35)

Schwartz et al. teaches substantially all the claimed invention but did not disclose

expressly the particular application involving limitations of

"input packet buffers synchronization and output packet buffer synchronization

being correlated via time distribution block".

Adam et al. teaches that input packet buffers (206) synchronization (208) and

output packet buffer (214) synchronization (216) being correlated via time distribution

block applicable to the wavelength division multiplexing (See Fig. 2, Col. 3, lines 20-34).

A person of ordinary skill in the art would have been motivated to employ Adam

et al. in Schwartz et al. in order to obtain a systems and methods for switching packets

of digital data in a switching node used in a digital data network and to take advantage

of input packet buffers synchronization and output packet buffer synchronization being correlated via time distribution block in claim 13-14, 16 and 19.

The suggestion/motivation to do so would have been to correlate input packet buffers synchronization and output packet buffer synchronization being via time distribution block, as suggested by Adam et al. in Col. 3, lines 20-34. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Adam et al. with the Schwartz et al. to obtain the inventions specified in claims 13-14, 16 and 19.

4. Claims 13-19,22-24 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 6,347,234 ("Schwartz et al.") in view of US patent No. 6,781,984 ("Adam et al.") and further in view of US patent No. 5,126,999 ("Munter et al.").

Regarding claims 22, 26 and 29-31, as discussed above, Schwartz et al. and Adam et al. teach a system for transporting data with a plurality of both ingress and egress optical signal lines with application substantially related to all the claimed invention.

Munter et al. teach a method on similar ingress unit for high speed packet switching and to space-division switching by means of input-buffered NxN switching or cross-point matrices (a method for transporting data) (See Fig. 1.and Fig. 3, Col. 5, lines 25-27) comprising of

demultiplexing (parsing) each incoming data stream (received data stream)

header in header decoder (41) into the appropriate packet (a plurality of data cells) (See

Fig. 4, Col. 5, lines 58-60),

decoding (identifying) the packet (plurality of data cells) header in header

decoder (41) for packet's switch output port destination (See Fig. 4, Col. 5, lines 63-66),

storing (segregating) the packets (plurality of data cells) into the plural FIFOs (F1

to F16, distinct sets of data cells) based on the packet's switch output port destination

(wherein the data set of a plurality of data cells has a common destination)) (See Fig. 4,

Col. 5, lines 58-63),

wherein storing (segregating) the packets (plurality of data cells) into plural

FIFOs (F1 to F16, distinct sets of data cells) having the same packet's switch output

port destination (wherein the data set of a plurality of data cells has a common

destination) (See Fig. 4, Col. 5, lines 58-63), and

operating dynamically on a real-time basis (sequentially transmitting) by means

of an N crosspoint selector (33) to yield a new selection of N crosspoints in the switch

(30) for connection of the input packets and buffers (distinct sets of a plurality of data

cells) to the corresponding destinations (See Fig. 3, Col. 5, lines 30-40).

A person of ordinary skill in the art would have been motivated to employ Munter

et al. in Schwartz et al. and Adam et al. in order to obtain a systems and methods for

switching packets of digital data in a switching node used in a digital data network and

to take advantage of the ingress unit for high speed packet switching and to space-

division switching by means of input-buffered cross-point switching matrices in claim 22, 26 and 29-31.

The suggestion/motivation to do so would have been to apply the ingress unit for high speed packet switching and to space-division switching by means of input-buffered cross-point switching matrices, as suggested by Munter et al. in Col. 5, lines 20-63. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Munter et al. with Schwartz et al. and Adam et al. to obtain the inventions specified in claims 22, 26 and 29-31.

Regarding claims 17-18, these claims have limitations that is similar to those of claim 16 wherein the multiplexer is configured to multiplex clock data into the single data stream and the clock data is embodied in an optical signal comprising a wavelength which is distinct from a plurality of wavelengths used for optical data signals, thus it is rejected with the same rationale applied against claim 16 above.

Regarding claims 15 and 23-24, these claims have limitations that is similar to those of claims 14 and 22 wherein the line component is configured to provide SONET line functions and wherein the service component is configured to provide IP service functions and the data cells comprises 12 overhead bytes and 84 data bytes and the STSI frames from which the data cells were parsed, thus it is rejected with the same rationale applied against claims 14 and 22 above.

Regarding claim 27-28, these claims have limitations that is similar to those of claim 26 wherein each of the plurality of time intervals comprises a plurality of timeslots

and wherein each of the buffer units corresponds to one of the plurality of timeslots and wherein sequentially transmitting the sets of data cells to the corresponding destinations comprises transmitting data cells in more than one buffer unit to a single destination in a single time interval, thus it is rejected with the same rationale applied against claim 26 above.

Allowable Subject Matter

5. Claims 2-6 and 32-33 are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is (571) 272-3129. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rkc

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